

SPECIAL COMMENT

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Adjusted Pension Liability Measures for 50 Largest US Local Governments¹

Several Local Governments Face Challenging Pension Risks Amidst Varied Landscape

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Summary

- » **There are several large local governments with outsized pension burdens large enough to cause material financial strain.** Notably, the adjusted net pension liabilities (ANPL) of the City of Chicago and Cook County are significantly higher than their annual revenues. The fiscal 2011 ANPL to revenue ratio exceeds 100% for 30 of the 50 local government issuers with the largest amount of debt outstanding (the 'top 50').
- » **Several major local governments have large annual pension costs that account for a formidable and growing portion of their total costs.** Four of the Top 50 local governments have actuarial contribution requirements in excess of 15% of operating revenues, including the City of Philadelphia (A2 stable), while seventeen of the Top 50 have actuarial costs that exceed 10% of the operating revenues when cost-sharing plan allocations are considered.
- » **Pension burdens of overlapping entities strain the tax bases of some local governments.** The city of Detroit's tax base is burdened not only by high pension and debt liabilities of the city, but also from overlapping entities. Similarly, Chicago's tax base is pressured by the unfunded pension liabilities of the city and overlapping local governments.
- » **Perennial underfunding of actuarial contribution requirements has amplified pension burdens.** Underfunding pensions can be a deliberate strategy for local governments to temporarily manage budget strains. In fiscal 2011, 33 of the top 50 local governments contributed less than what was actuarially required, taking into account not only single employer and agent plans, but also exposure to cost-sharing plans where the ARC was not fully funded.
- » **State support for local pensions alleviates the pension burden for some local governments, particularly school districts.** In fiscal 2011, the state provided 6-81% of the total pension contributions for the 10 local governments in the top 50 that received support for pensions. While this state support reduces pension burdens, there is risk of cost-shifting to local governments from states. We allocate pension liabilities between states and local governments on a pro rata basis.

¹ We define the 50 largest US local governments with Moody's general obligation ratings according to gross debt outstanding.

Moody's Adjustments to Pension Data

We calculate the Adjusted Net Pension Liability (ANPL) for local governments as the difference between the actuarial value of a pension plan's assets and its adjusted liabilities. We adjust reported pension liabilities of US state and local governments by applying a bond index rate to future liabilities in order to discount the present value of these obligations. We also distribute the liabilities of multiple-employer cost-sharing plans to participating governments based on their pro rata share of contributions. We expect to utilize the market value of assets for local governments in accordance with expected disclosure improvements by the Governmental Accounting Standards Board (GASB).

To assess pension burden we compare the ANPL to issuers' operating revenues and to the size of their tax base, measured by full value of taxable property. For greater detail on our adjustments and their application in our ratings methodology, please refer to our reports "Adjustments to US State and Local Reported Pension Data," released in April 2013 and "Request for Comment: US Local Government General Obligation Bond Methodology" released in August 2013.

The pension data we use includes the local governments' largest multiple-employer cost-sharing, multiple-employer agent, and single-employer plans. We excluded plans that account for less than 5% of the local government's total liabilities.

We harnessed pension data from 2011 financial reports of the local governments and the pension plans. The pension data may be from valuation periods that do not coincide with a local government's 2011 fiscal year. Reported valuations often lag by a year, and sometimes by two years. Pension plans may also report on a calendar year or some other basis that differs from the state's fiscal year. Where possible we report pension costs and ANPL net of support for pension costs from self-supporting enterprises and non-major/non-operating funds. Table 2 of the Appendix provides ANPL covered by the financial statements as a whole, subject to the exclusion in some cases of very small plans, and the "net" ANPL attributable solely to core government operations.

Several of the Largest Local Governments Have Outsized Pension Liabilities

The pension burden of current and future employees is significant and growing for many local governments across the US. To assess a local government's pension burden we compare ANPL to several different metrics that measure its capacity to pay pension liabilities, including revenues, taxable full value and outstanding debt. The degree of pension burden varies widely across the 50 US local government debt issuers with the most debt outstanding (the 'top 50'), but there are several outliers with challenging pension liabilities. Notably, the City of Chicago (A3 negative) has the largest pension burden among its peers² as measured by its adjusted net pension liability relative to revenues (ANPL/revenue). By this measure, Cook County, IL ranks second, and Denver County School District ranks third (see Exhibit 1). Moreover, 30 of the top 50 local governments' have ANPL/revenue greater than 100% and seven are greater 300% (Exhibit 2).

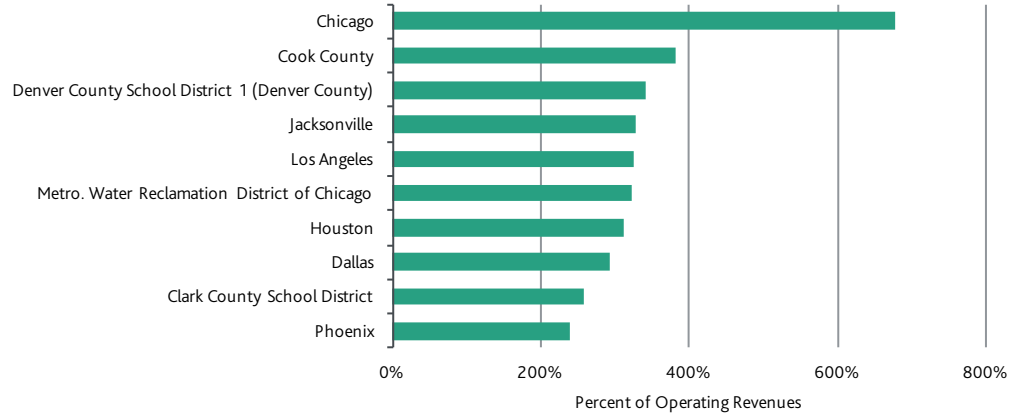
Conversely, there are plenty of local governments in the top 50 with very low pension burdens. For example, Washington DC's ANPL/revenue is only 11%, and Wake County, NC's is only 15%.

² Note that the all ANPL figures discussed in this report cover fiscal 2011 financial reporting only. Our recent rating action for the City of Chicago also incorporated fiscal 2012 reported and Moody's-adjusted pension information.

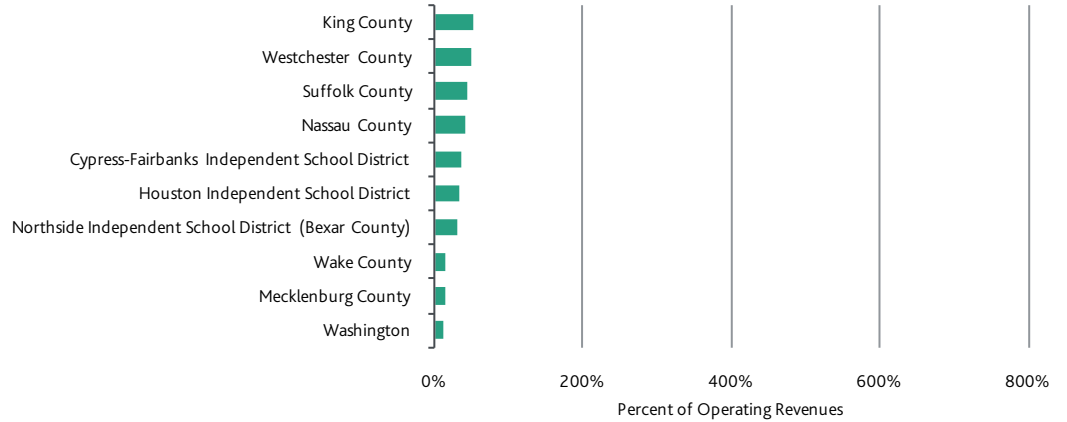
EXHIBIT 1

Net Pension Burdens Vary Widely Although Several Exceed 300% of Revenues

Ten Largest ANPL to Revenue Ratios



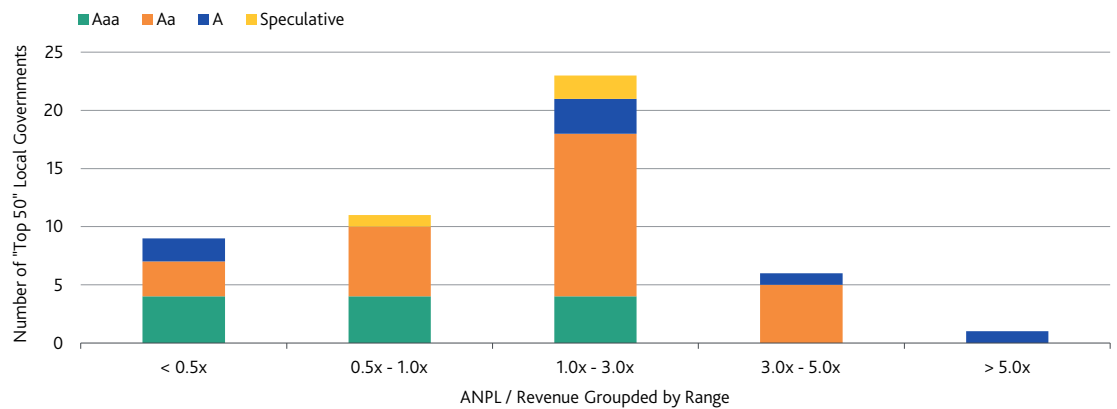
Ten Smallest ANPL to Revenue Ratios



Sources: Issuer CAFRs, Plan CAFRs, Moody's pension database

EXHIBIT 2

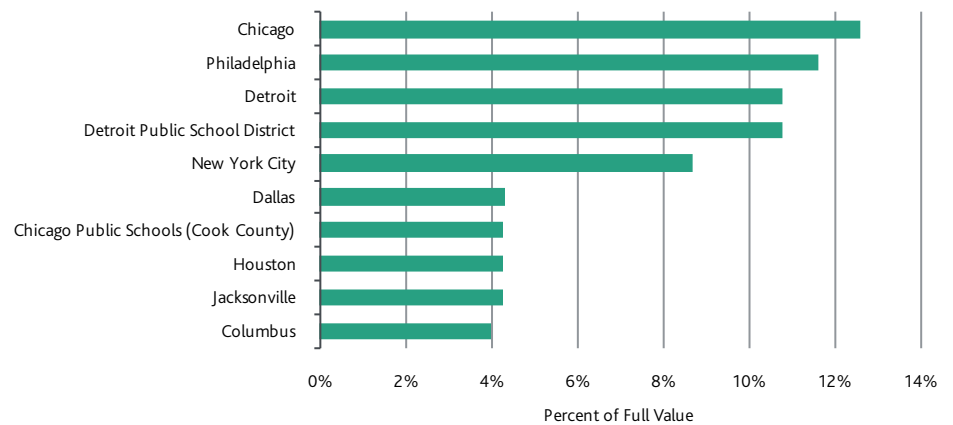
Thirty of 50 Largest Local Governments ANPL greater than 100% of Revenues in Fiscal 2011



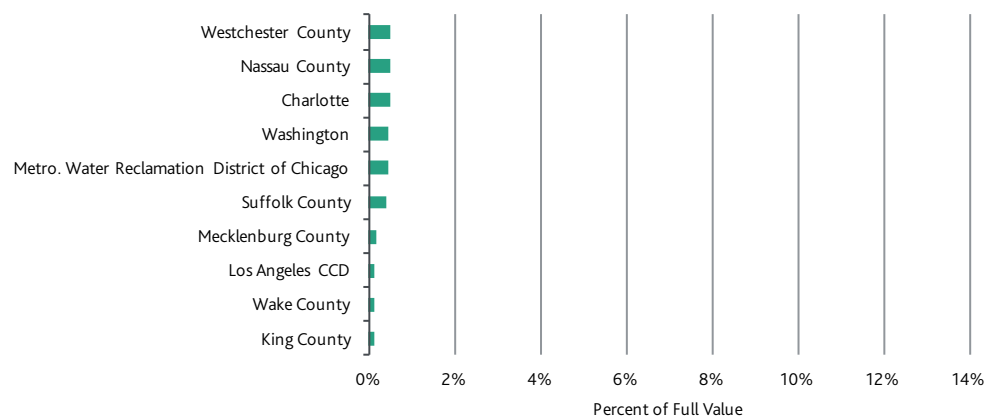
Sources: Issuer CAFRs, Plan CAFRs, Moody's pension database

Comparing issuers' ANPL to the full value of their taxable real estate (ANPL/full value) is useful for assessing their pension burden because for most, property taxes are their single largest source of revenue; taxable value is also a useful proxy measure of total economic wealth. Local governments have limited revenue flexibility compared to states, and often resort to raising property tax rates when they need to increase revenues. Evaluating ANPL/revenues and ANPL/full value paints a more robust picture of pension burdens by measuring issuers' immediate ability to fund pension liabilities and the amount of taxable resources they could harness in the future. For example, the Metropolitan Water Reclamation District of Chicago (Aa1 negative) ranks in the top 10 highest ANPL/revenues, but compared to most of the top 50 local governments, the district's ANPL/taxable full value is low (Exhibit 3). Conversely, the cities of Chicago, Dallas, Houston and Jacksonville rank in the top 10 for highest ANPL/revenue and ANPL/full value.

EXHIBIT 3
Fiscal 2011 Pension Burdens Exceed 8% of Full Value for 5 of the Largest Local Governments
 Ten Largest ANPL to Full Value Ratios



Ten Smallest ANPL to Full Value Ratios

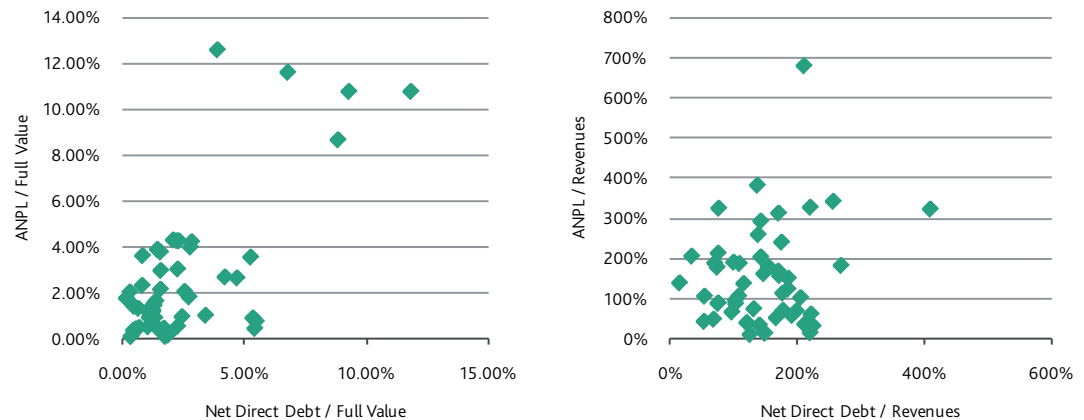


Sources: Issuer CAFRs, Plan CAFRs, Moody's pension database, Moody's MFRA

The ANPL to net direct debt is greater than 100% for 23 local governments in the top 50, which is indicative of how large local government pension liabilities are, and the degree to which they compound a government's long-term obligations (Exhibit 4).

EXHIBIT 4

Adjusted Pension Liabilities Exceed Net Direct Debt for Nearly Half of 50 Largest Local Governments



Sources: Issuer CAFRs, Plan CAFRs, Moody's pension database, Moody's MFRA

Pension Burden of Overlapping Entities A Factor for Some Local Governments

The level of debt and pension liabilities of overlapping jurisdictions relative to full taxable value indicates the extent that the entire tax base is leveraged. In the table below we add the direct and overlapping debt and adjusted pension liabilities of the five largest US cities and the City of Detroit (Exhibit 5). The data show that Detroit has the most combined debt and pension liabilities as a percentage of full value. Chicago has the largest overlapping pension liabilities, which includes the large unfunded pension liabilities of: Cook County, Chicago Public Schools, the Metropolitan Water Reclamation District of Chicago, the Cook County Forest Preserve District (A1 negative) and the Chicago Park District (A1 negative). Chicago and these overlapping local governments have been downgraded recently because of their pension liabilities.

EXHIBIT 5

Overlapping Debt and Pension Liabilities Far Higher in Detroit than Other Large Cities (\$in billions)

\$ in billions	New York	Los Angeles	Chicago	Houston	Philadelphia	Detroit
GO Rating	Aa2	Aa2	A3	Aa2	A2	Caa3
Net Direct Debt	\$70.3	\$3.5	\$8.9	\$3.3	\$4.3	\$2.2
ANPL	\$69.0	\$14.6	\$28.5	\$6.1	\$7.3	\$2.0
Direct Debt and Pension Sub-total	\$139.3	\$18.1	\$37.3	\$9.4	\$11.6	\$4.3
2011 Full Value	\$793.7	\$401.3	\$225.6	\$141.8	\$63.0	\$18.9
Direct Debt and Pensions as % of Full Value	18%	5%	17%	7%	18%	23%
Overlapping Debt	\$0.0	\$14.1	\$9.9	\$6.4	\$2.9	\$1.9
Overlapping ANPL	\$0.0	\$16.9	\$17.4	\$1.9	\$1.7	\$2.5
Overlapping Sub-Total	\$0.0	\$31.0	\$27.3	\$8.4	\$4.6	\$4.4
Total Direct and Overlapping Debt and Pensions	\$139.3	\$49.1	\$64.6	\$17.8	\$16.2	\$8.6
Total Direct and Overlapping Debt and Pension as % of Full Value	18%	12%	29%	13%	26%	46%

Notes

- 1) Philadelphia has implemented a new property assessment system. As a result, the city's full value is likely to increase considerably. The impact of the reassessment is not incorporated into this report.
- 2) Overlapping ANPL estimate for Los Angeles excludes a number of small special districts.
- 3) Overlapping ANPL estimate for Houston excludes a number of small special districts.
- 4) Overlapping ANPL for Chicago excludes city colleges.
- 5) All data reflects fiscal 2011 totals. Totals and sub-totals may not sum due to rounding. Net direct debt does not include enterprise revenue or self-supporting debt backed out by Moody's.

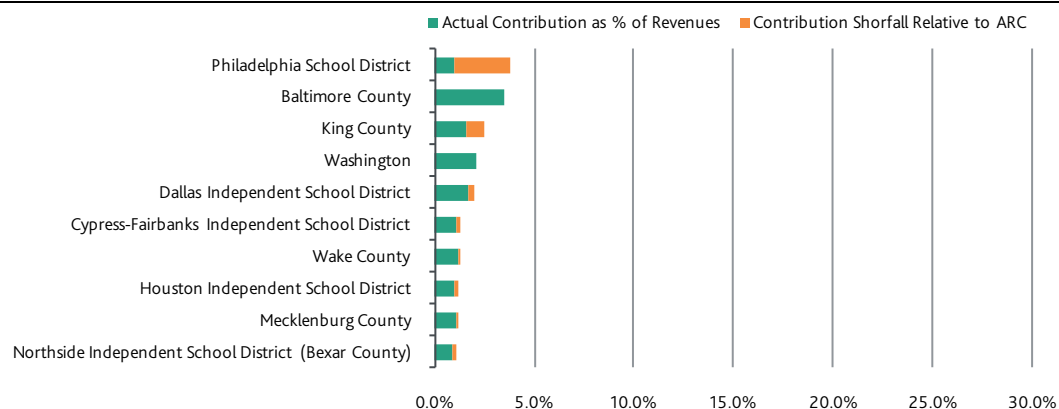
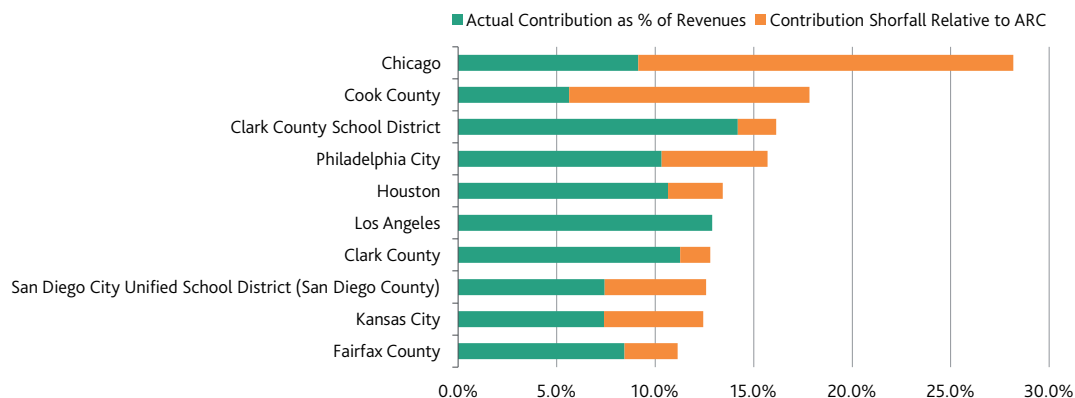
Sources: City CAFRs, Moody's Pension Database

Underfunding of Actuarial Requirements Increases Future Burden

Local governments' annual pension costs vary considerably. On the high end, Chicago's fiscal 2011 actuarial pension cost was a formidable 28% of its revenues, compared to only 1% for Northside Independent School District, TX (Aa1 stable). Exhibit 6 below shows the ten local governments with highest actuarial pension costs relative to operating revenues, and the ten with the lowest. To measure how much a local government's annual contributions fall short of actuarial standards, we include our estimate of its pro rata share of contribution shortfalls to cost sharing plan(s) it participates in, a figure that is not typically disclosed in issuers' financial statements and is not considered in the computation of the GASB ARC. For example, the Clark County, NV (Aa1 stable) has a track record of making its full pension contributions as required by state statute, but these payments do not include what we estimate is its share of the contribution shortfall of the cost sharing plan that it participates in. When this share is included, Clark County's contributions fall short of actuarial requirements (Exhibit 6).

EXHIBIT 6

Annual Pension Costs Range from Substantial Portions of Operations to Almost Zero



Sources: Issuer CAFRs, Plan CAFRs, Moody's pension database

Note: "ARC" includes pro rata shares of cost-sharing plan actuarial requirements allocated by Moody's.

The ARC can vary considerably between local governments because of different actuarial assumptions such as the cost method, discount rate, and unfunded liability amortization. While contribution shortfalls reduce near term expenditures, they also increase the liability that must be amortized, raising future costs to levels that might be unsustainable. In fiscal 2011, more than half of the top 50 either underfunded their single-employer or agent plan(s), or contributed to a cost-sharing plan that did not meet its ARC. The size of contribution shortfalls relative to operating budgets varies considerably, from nearly zero to a very severe 19% (Exhibit 7).

EXHIBIT 7

Ten Largest Contribution Shortfalls Relative to ARCs as a Percentage of Revenues

	Single-Agent	Moody's Cost-sharing Allocation	Total
Chicago	19.0%	0.0%	19.0%
Cook County	12.2%	0.0%	12.2%
Denver County School District 1 (Denver County)	0.0%	6.2%	6.2%
Philadelphia City	5.4%	0.0%	5.4%
San Diego City Unified School District (San Diego County)	0.0%	5.1%	5.1%
Kansas City	5.0%	0.0%	5.0%
Metro. Water Reclamation District of Chicago	5.0%	0.0%	5.0%
Chicago Public Schools (Cook County)	4.4%	0.0%	4.4%
Los Angeles Unified School District) Los Angeles County	0.0%	3.3%	3.3%
Columbus	0.0%	2.8%	2.8%

Sources: Issuer CAFRs, Plan CAFRs, Moody's pension database

Of the eight top 50 local governments with ANPL to revenues greater than 300%, only two contributed their full ARC in fiscal 2011. The city of Jacksonville (Aa1 stable) was the only one among the top 50 that: paid its full ARC, didn't have exposure to cost-sharing contribution shortfalls, and didn't report a Net Pension Obligation (NPO)³ (Exhibit 8). Jacksonville has a high net pension liability not because of contribution underfunding but because of other factors such as asset performance and benefit accruals.⁴ Jacksonville's ANPL is also driven by a relatively low adjusted discount rate for its fiscal 2011 data (4.69%), tied to its actuarial valuation dates. Los Angeles is another example of a large local government with relatively high liabilities despite full ARC payments in fiscal 2011 and a relatively modest NPO in comparison to several of the issuers in Exhibit 8.

There is a positive correlation between ANPL and contribution shortfalls. Exhibit 9 shows that in general, as contribution shortfalls relative to revenues increase, so does ANPL to revenues. Chicago and Cook County are two clear outliers that have both high ANPL to revenues and large contribution shortfalls; the majority of issuers' contribution shortfalls are below 5% of revenues.

EXHIBIT 8

Most Large ANPL to Revenue Ratios Belong to Issuers with Contribution Shortfalls

Issuer	ANPL / Op Revs	Contribution Shortfalls Relative to Revenues	2011 Net Pension Obligation (as reported in \$000s)*
Chicago	678%	19%	\$ 5,386,668
Cook County	382%	12%	\$ 1,830,262
Denver County School District 1	342%	6%	\$ -
Jacksonville	327%	0%	\$ (3,449)
Los Angeles	324%	0%	\$ 58,821
Metro. Water Reclamation District of Chicago	322%	5%	\$ 108,482
Houston	312%	3%	\$ 757,321

*As reflected on government-wide financial statements. Does not incorporate any back out for enterprise support.

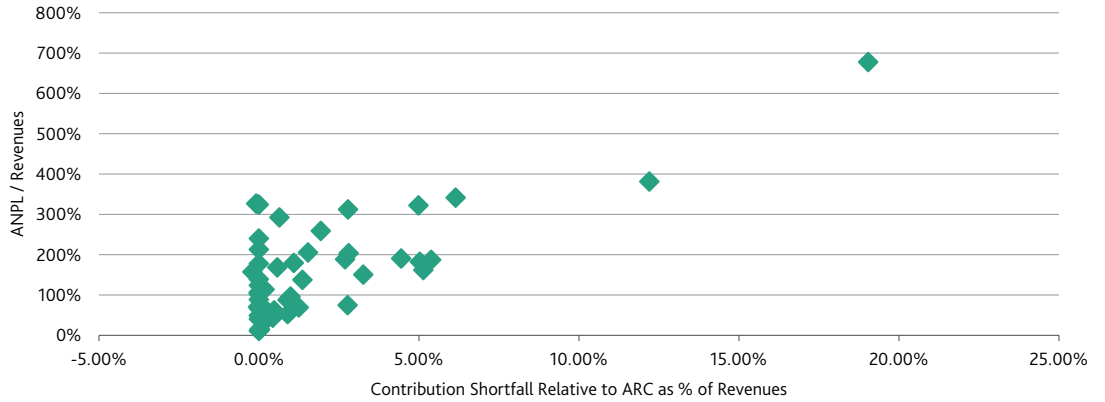
Sources: Issuer CAFRs, Plan CAFRs, Moody's pension database

³ The Net Pension Obligation (NPO) reflects accumulated contribution shortfalls relative to actuarial requirements, also accounting for interest and amortization. Local governments are not required to report a Net Pension Obligation related to their contributions to cost sharing plans, provided that they make a full contractual contribution. Nonetheless, local governments could face higher future contribution rates to make up for funding shortfalls of cost sharing plans caused by statutory or contractual contribution requirements that do not meet actuarial requirements, which adds risk and underscores their lack of control as participants in cost sharing plans.

⁴ Enterprises and various other funds supported approximately \$9 million of Jacksonville's fiscal 2011 pension contributions. This support is not reflected in Jacksonville's ANPL data. While the enterprises contribute to pension contributions, city management has indicated that they are not self-supporting, and receive operating subsidies from the city.

EXHIBIT 9

Contribution shortfalls drive high pension liabilities



Sources: Issuer CAFRs, Plan CAFRs, Moody's pension database, Moody's MFRA

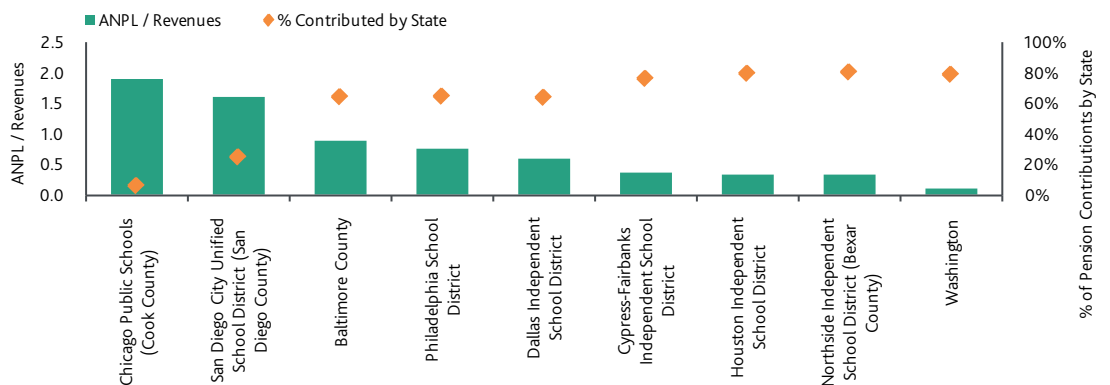
State Support Significantly Reduces Pension Burden for Some School Districts

Twenty-three states subsidize part or all of school districts' annual pension contributions. In 11 states, these 'on-behalf' payments cover 40% or more of school districts' total annual employer contributions.

On-behalf payments for school districts in the top 50 range from 6% of total annual contributions for Chicago Public Schools (A3 negative) to 81% for Northside Independent School District (ISD), TX (Exhibit 10). Chicago Public Schools differs significantly from other school districts in Illinois in that its employees participate in a single employer plan, as opposed to the statewide Teachers Retirement System (TRS). Most Illinois school districts receive on-behalf payments from the state that cover most of their pension costs, but the state only contributes a small proportion of Chicago Public Schools' pension costs.

EXHIBIT 10

State Support for Pensions Substantially Reduces Allocated Liabilities for Some Local Governments



Data Appendices

Note: The data in the following tables reflects pension information as disclosed by local governments and cost sharing plans, and information on budgetary allocation of pension contributions that was provided to us by some of the local governments. Appendix 3 provides Moody's ANPL derived entirely from government-wide financial reporting, as well as Moody's ANPL net of support from self-supporting enterprise and non-operating governmental funds. The various funds considered by Moody's as "operating funds" for each issuer are listed in Appendix 6.

TABLE 1

Selected Characteristics of Local Government Pension Plans

Issuer	State	Underlying Rating	Gross Debt Outstanding (\$000)	Number of plans ¹			Total	Valuation Date for Largest Plan	As Reported Discount Rate for Largest Plan	Aggregate UAAL (\$000) ²	Moody's Adjusted Discount Rate for Largest Plan
				Single-Employer	Agent	Cost-Sharing					
Baltimore County	MD	Aaa	2,254,585	0	0	2	2	6/30/2010	7.88%	515,213	5.47%
Broward County School District	FL	Aa2	1,851,336	0	0	1	1	7/1/2011	7.75%	702,443	5.67%
Charlotte	NC	Aaa	1,583,463	2	0	1	3	12/31/2010	7.25%	101,674	5.54%
Chicago	IL	A3	8,636,060	4	0	0	4	12/31/2011	8.00%	16,298,961	4.40%
Chicago Public Schools (Cook County)	IL	A3	5,895,391	1	0	0	1	6/30/2010	8.00%	5,372,773	5.47%
Clark County	NV	Aa1	2,739,047	1	0	1	2	6/30/2011	8.00%	2,725,894	5.67%
Clark County School District	NV	A1	3,554,575	0	0	1	1	6/30/2011	8.00%	2,722,208	5.67%
Columbus	OH	Aaa	2,385,570	0	0	2	2	1/1/2011	8.25%	996,606	5.54%
Cook County	IL	A1	3,780,315	1	0	0	1	12/31/2011	7.50%	4,731,173	4.40%
Cypress-Fairbanks Independent School District	TX	Aa2	1,736,892	0	0	1	1	8/31/2011	8.00%	86,497	5.21%
Dallas	TX	Aa1	1,644,657	2	0	0	2	1/1/2011	8.50%	1,140,530	5.54%
Dallas Independent School District	TX	Aa2	2,567,329	0	0	1	1	8/31/2011	8.00%	238,357	5.21%
Denver County School District 1 (Denver County)	CO	Aa2	1,875,196	0	0	1	1	12/31/2011	8.00%	637,821	4.40%
Detroit	MI	Caa3	2,233,508	2	0	0	2	6/30/2010	7.50%	615,701	5.47%
Detroit Public School District	MI	B2	2,105,805	0	0	1	1	9/30/2010	8.00%	895,124	5.14%
Fairfax County	VA	Aaa	3,490,527	4	0	1	5	6/30/2010	7.00%	3,812,355	5.47%
Harris County	TX	Aaa	3,334,349	0	1	0	1	12/31/2010	8.00%	383,476	5.54%
Honolulu City and County	HI	Aa1	2,570,807	0	0	1	1	6/30/2011	7.75%	1,373,619	5.67%
Houston	TX	Aa2	3,441,463	3	0	0	3	7/1/2010	8.50%	2,286,100	5.47%
Houston Independent School District	TX	Aaa	2,345,443	0	0	1	1	8/31/2011	8.00%	174,970	5.21%
Jacksonville	FL	Aa1	2,477,974	3	0	0	3	9/30/2011	7.75%	2,140,721	4.69%
Kansas City	MO	Aa2	1,640,784	4	0	0	4	5/1/2010	7.50%	550,094	5.79%
King County	WA	Aaa	2,288,449	0	0	2	2	6/30/2011	8.00%	182,520	5.67%
Los Angeles	CA	Aa2	3,361,857	3	0	0	3	6/30/2011	7.75%	7,811,520	5.67%
Los Angeles CCD	CA	Aa1	2,305,907	0	1	2	3	6/30/2010	7.75%	340,755	5.47%
Los Angeles County	CA	Aa2	1,805,634	1	0	0	1	6/30/2010	7.75%	7,807,446	5.47%
Los Angeles Unified School District (Los Angeles County)	CA	Aa2	11,712,521	0	1	2	3	6/30/2010	7.75%	4,590,901	5.47%
Mecklenburg County	NC	Aaa	1,848,300	0	1	3	4	12/31/2010	7.25%	11,940	5.54%
Metro. Water Reclamation District of Chicago	IL	Aa1	2,609,740	1	0	0	1	12/31/2011	7.75%	1,003,922	4.40%

TABLE 1

Selected Characteristics of Local Government Pension Plans

Issuer	State	Underlying Rating	Gross Debt Outstanding (\$000)	Number of plans ¹			Total	Valuation Date for Largest Plan	As Reported Discount Rate for Largest Plan	Aggregate UAAL (\$000) ²	Moody's Adjusted Discount Rate for Largest Plan
				Single-Employer	Agent	Cost-Sharing					
Miami-Dade County	FL	Aa2	4,148,168	1	0	1	2	7/1/2011	7.75%	1,374,258	5.67%
Miami-Dade County School District	FL	Aa3	3,279,171	0	0	1	1	7/1/2011	7.75%	991,739	5.67%
Montgomery County	MD	Aaa	2,871,408	0	0	1	1	6/30/2011	7.50%	875,291	5.67%
Nashville-Davidson	TN	Aa1	2,815,734	6	0	1	7	7/1/2010	8.00%	603,209	5.47%
Nassau County	NY	A2	3,557,503	0	0	2	2	4/1/2010	7.50%	208,884	6.05%
New York City	NY	Aa2	77,318,459	2	0	3	5	6/30/2009	8.00%	38,745,436	6.20%
Northside Independent School District (Bexar County)	TX	Aa1	1,831,543	0	0	1	1	8/31/2011	8.00%	73,752	5.21%
Palm Beach County School District	FL	Aa3	1,832,003	0	0	1	1	7/1/2011	7.75%	499,885	5.67%
Philadelphia City	PA	A2	4,173,400	1	0	0	1	7/1/2010	8.15%	4,936,172	5.47%
Philadelphia School District	PA	Ba2	3,144,227	0	0	1	1	6/30/2010	8.00%	688,803	5.47%
Phoenix	AZ	Aa1	2,410,745	1	2	0	3	6/30/2011	8.00%	1,843,896	5.67%
San Antonio	TX	Aaa	1,963,194	3	2	0	5	10/1/2010	7.80%	517,443	5.14%
San Bernardino County	CA	Aa2	1,564,800	0	0	1	1	6/30/2011	7.75%	1,409,087	5.67%
San Diego City Unified School District (San Diego County)	CA	Aa3	1,824,029	0	0	2	2	6/30/2010	7.75%	856,226	5.47%
San Francisco City and County	CA	Aa1	2,334,044	1	1	0	2	7/1/2010	7.75%	1,621,927	5.47%
Santa Clara County	CA	Aa2	1,973,935	0	4	0	4	6/30/2010	7.75%	1,532,076	5.47%
Shelby County	TN	Aa1	1,455,753	1	1	1	3	6/30/2011	8.00%	192,746	5.67%
Suffolk County	NY	A2	1,412,059	0	0	4	4	4/1/2010	7.50%	235,053	6.05%
Wake County	NC	Aaa	2,058,808	1	0	1	2	12/31/2010	7.25%	11,497	5.54%
Washington	DC	Aa2	8,486,798	1	0	0	1	10/1/2010	7.00%	(494,635)	5.14%
Westchester County	NY	Aaa	1,687,823	0	0	5	5	4/1/2010	7.50%	292,550	6.05%

1 Excludes very small plans and very small cost-sharing shares.

2 UAAL on a reported basis includes shares of cost-sharing plans.

TABLE 2

Moody's Adjusted Net Pension Liability (ANPL) Rankings

Rank	Issuer	State	Aggregate UAAL (\$000) ¹	ANPL (\$000)	ANPL net of Self-Supporting Enterprises, Non-Major Funds, and Component Units (\$000)
1	New York City	NY	38,745,436	68,992,354	68,992,354
2	Chicago	IL	16,298,961	31,682,969	28,461,177
3	Los Angeles County	CA	7,807,446	22,759,165	18,950,600
4	Los Angeles	CA	7,811,520	19,130,422	14,621,055
5	Chicago Public Schools (Cook County)	IL	5,372,773	10,593,127	10,593,127
6	Cook County	IL	4,731,173	10,566,294	10,566,294
7	Los Angeles Unified School District (Los Angeles County)	CA	4,590,901	10,540,897	9,679,740
8	Fairfax County	VA	3,812,355	7,395,728	7,395,728
9	Philadelphia City	PA	4,936,172	8,532,453	7,332,867
10	Houston	TX	2,286,100	7,276,403	6,084,482
11	Clark County School District	NV	2,722,208	5,708,337	5,708,337
12	San Francisco City and County	CA	1,621,927	7,490,991	5,602,188
13	Miami-Dade County	FL	1,374,258	4,424,648	4,424,648
14	Santa Clara County	CA	1,532,076	4,302,931	4,288,050
15	Clark County	NV	2,725,894	5,634,312	3,874,564
16	Jacksonville	FL	2,140,721	4,571,533	3,765,837
17	Dallas	TX	1,140,530	4,291,958	3,613,470
18	Miami-Dade County School District	FL	991,739	3,176,805	3,176,805
19	Phoenix	AZ	1,843,896	3,974,886	3,159,749
20	Denver County School District 1 (Denver County)	CO	637,821	2,541,476	2,541,476
21	Broward County School District	FL	702,443	2,250,111	2,250,111
22	San Bernardino County	CA	1,409,087	3,358,014	2,236,404
23	Detroit Public School District	MI	895,124	2,186,434	2,186,434
24	Metro. Water Reclamation District of Chicago	IL	1,003,922	2,069,064	2,069,064
25	Detroit	MI	615,701	3,019,068	2,038,526
26	San Diego City Unified School District (San Diego County)	CA	856,226	1,974,084	1,974,084
27	Honolulu City and County	HI	1,373,619	2,348,538	1,941,910
28	Montgomery County	MD	875,291	1,810,200	1,810,200
29	Columbus	OH	996,606	2,399,939	1,781,364
30	Nashville-Davidson	TN	603,209	1,792,636	1,718,317
31	Philadelphia School District	PA	688,803	1,685,877	1,685,877
32	Palm Beach County School District	FL	499,885	1,601,266	1,601,266
33	Harris County	TX	383,476	1,474,185	1,474,185
34	Baltimore County	MD	515,213	1,392,744	1,392,744
35	San Antonio	TX	517,443	2,021,450	1,309,654
36	Nassau County	NY	208,884	1,080,222	1,080,222
37	Suffolk County	NY	235,053	1,270,980	1,067,479
38	Kansas City	MO	550,094	1,202,429	1,041,931
39	Westchester County	NY	292,550	1,265,963	845,244
40	Los Angeles CCD	CA	340,755	812,229	812,229
41	Dallas Independent School District	TX	238,357	797,964	797,964

TABLE 2

Moody's Adjusted Net Pension Liability (ANPL) Rankings

Rank	Issuer	State	Aggregate UAAL (\$000) ¹	ANPL (\$000)	ANPL net of Self-Supporting Enterprises, Non-Major Funds, and Component Units (\$000)
42	Washington	DC	(494,635)	658,313	658,313
43	Shelby County	TN	192,746	741,959	642,496
44	Houston Independent School District	TX	174,970	585,759	585,759
45	King County	WA	182,520	1,329,585	397,720
46	Charlotte	NC	101,674	463,872	374,974
47	Cypress-Fairbanks Independent School District	TX	86,497	289,573	289,573
48	Northside Independent School District (Bexar County)	TX	73,752	246,905	246,905
49	Mecklenburg County	NC	11,940	206,153	178,285
50	Wake County	NC	11,497	150,958	147,913

¹ Does not reflect back out for support from enterprises and other funds.

TABLE 3

Adjusted Pension and Debt Burdens Relative to Tax Base Size

Rank	Issuer	State	ANPL as % of Full Value	Net Direct Debt as % of Full Value
1	Chicago	IL	12.6%	3.9%
2	Philadelphia City	PA	11.6%	6.8%
3	Detroit	MI	10.8%	11.8%
4	Detroit Public School District	MI	10.8%	9.3%
5	New York City	NY	8.7%	8.9%
6	Dallas	TX	4.3%	2.1%
7	Chicago Public Schools (Cook County)	IL	4.3%	2.3%
8	Houston	TX	4.3%	2.3%
9	Jacksonville	FL	4.3%	2.9%
10	Columbus	OH	4.0%	2.8%
11	Fairfax County	VA	3.9%	1.5%
12	San Francisco City and County	CA	3.8%	1.6%
13	Los Angeles	CA	3.6%	0.9%
14	Kansas City	MO	3.6%	5.3%
15	Denver County School District 1 (Denver County)	CO	3.1%	2.3%
16	Clark County School District	NV	3.0%	1.6%
17	Nashville-Davidson	TN	2.7%	4.2%
18	Philadelphia School District	PA	2.7%	4.7%
19	Cook County	IL	2.3%	0.8%
20	Phoenix	AZ	2.2%	1.6%
21	Los Angeles Unified School District (Los Angeles County)	CA	2.1%	2.6%
22	Clark County	NV	2.1%	0.3%
23	San Antonio	TX	1.8%	2.8%
24	Los Angeles County	CA	1.8%	0.2%
25	Miami-Dade County	FL	1.7%	1.4%
26	Baltimore County	MD	1.6%	1.3%
27	San Diego City Unified School District (San Diego County)	CA	1.5%	1.3%
28	Santa Clara County	CA	1.4%	0.5%
29	San Bernardino County	CA	1.3%	0.7%
30	Honolulu City and County	HI	1.3%	1.3%
31	Broward County School District	FL	1.2%	1.1%
32	Miami-Dade County School District	FL	1.2%	1.3%
33	Dallas Independent School District	TX	1.0%	3.4%
34	Shelby County	TN	1.0%	2.5%
35	Palm Beach County School District	FL	1.0%	1.1%
36	Montgomery County	MD	0.9%	1.4%
37	Cypress-Fairbanks Independent School District	TX	0.9%	5.4%
38	Northside Independent School District (Bexar County)	TX	0.8%	5.5%
39	Houston Independent School District	TX	0.6%	2.3%
40	Harris County	TX	0.5%	1.1%
41	Westchester County	NY	0.5%	0.7%
42	Nassau County	NY	0.5%	1.5%

TABLE 3

Adjusted Pension and Debt Burdens Relative to Tax Base Size

Rank	Issuer	State	ANPL as % of Full Value	Net Direct Debt as % of Full Value
43	Charlotte	NC	0.5%	1.7%
44	Washington	DC	0.5%	5.5%
45	Metro. Water Reclamation District of Chicago	IL	0.5%	0.6%
46	Suffolk County	NY	0.4%	0.5%
47	Mecklenburg County	NC	0.2%	1.9%
48	Los Angeles CCD	CA	0.1%	0.4%
49	Wake County	NC	0.1%	1.8%
50	King County	WA	0.1%	0.4%

Note: Philadelphia has implemented a new property assessment system. As a result, the city's full value is likely to increase considerably. The impact of the reassessment is not incorporated into this report.

TABLE 4

Adjusted Pension and Debt Burdens Relative to Revenues

Rank	Issuer	State	ANPL as % of Operating Revenue	Net Direct Debt as % of Operating Revenue
1	Chicago	IL	678.2%	210.9%
2	Cook County	IL	381.6%	137.7%
3	Denver County School District 1 (Denver County)	CO	341.6%	256.8%
4	Jacksonville	FL	326.9%	220.7%
5	Los Angeles	CA	324.5%	77.0%
6	Metro. Water Reclamation District of Chicago	IL	323.4%	410.5%
7	Houston	TX	312.4%	171.0%
8	Dallas	TX	292.5%	143.0%
9	Clark County School District	NV	259.1%	139.0%
10	Phoenix	AZ	240.2%	175.7%
11	Santa Clara County	CA	213.0%	76.1%
12	Clark County	NV	205.6%	34.6%
13	Columbus	OH	203.7%	143.0%
14	Chicago Public Schools (Cook County)	IL	190.5%	100.4%
15	Fairfax County	VA	188.6%	70.6%
16	Philadelphia City	PA	187.3%	109.4%
17	Kansas City	MO	182.4%	269.1%
18	Detroit Public School District	MI	179.6%	154.7%
19	San Francisco City and County	CA	177.8%	74.7%
21	San Diego City Unified School District (San Diego County)	CA	162.0%	147.7%
22	Detroit	MI	157.3%	172.4%
23	Los Angeles Unified School District (Los Angeles County)	CA	150.6%	186.5%
20	Honolulu City and County	HI	168.5%	170.4%
24	Los Angeles County	CA	139.1%	15.5%
25	Miami-Dade County	FL	137.5%	116.2%
26	San Antonio	TX	123.9%	185.8%
27	Nashville-Davidson	TN	113.8%	177.5%
28	New York City	NY	106.3%	108.3%
29	San Bernardino County	CA	106.2%	54.7%
30	Harris County	TX	102.5%	205.6%
31	Miami-Dade County School District	FL	96.1%	103.2%
32	Broward County School District	FL	88.9%	76.4%
33	Baltimore County	MD	88.6%	75.6%
34	Palm Beach County School District	FL	87.5%	103.5%
35	Philadelphia School District	PA	74.7%	132.1%
36	Shelby County	TN	70.8%	177.9%
37	Los Angeles CCD	CA	69.1%	198.9%
38	Montgomery County	MD	66.8%	97.7%
39	Charlotte	NC	61.8%	222.0%
40	Dallas Independent School District	TX	58.4%	192.3%
41	King County	WA	52.6%	167.4%
42	Westchester County	NY	48.8%	69.0%

TABLE 4

Adjusted Pension and Debt Burdens Relative to Revenues

Rank	Issuer	State	ANPL as % of Operating Revenue	Net Direct Debt as % of Operating Revenue
43	Suffolk County	NY	43.6%	54.0%
44	Nassau County	NY	40.6%	121.0%
45	Cypress-Fairbanks Independent School District	TX	36.7%	211.9%
46	Houston Independent School District	TX	34.4%	140.9%
47	Northside Independent School District (Bexar County)	TX	31.7%	225.4%
48	Wake County	NC	15.2%	220.6%
49	Mecklenburg County	NC	13.9%	149.6%
50	Washington	DC	10.9%	126.2%

TABLE 5

Budgetary Metrics: Annual Required Contribution (ARC)

Rank	Issuer	State	Annual Required Contributions (\$000)			ARC as % of Operating Revenue
			Single-Employer & Agent Plans	Cost-Sharing Plans Pro-rata ARC (share of plan-level actuarial requirement)	Total	
1	Chicago	IL	1,182,399	-	1,182,399	28.2%
2	Cook County	IL	493,724	-	493,724	17.8%
3	Clark County School District	NV	-	355,511	355,511	16.1%
4	Philadelphia City	PA	614,939	-	614,939	15.7%
5	Houston	TX	261,710	-	261,710	13.4%
6	Los Angeles	CA	580,653	-	580,653	12.9%
7	Clark County	NV	-	241,305	241,305	12.8%
8	San Diego City Unified School District (San Diego County)	CA	-	153,306	153,306	12.6%
9	Kansas City	MO	71,011	-	71,011	12.4%
10	Fairfax County	VA	259,634	176,946	436,580	11.1%
11	Santa Clara County	CA	223,729	-	223,729	11.1%
12	Miami-Dade County	FL	41,610	308,606	350,216	10.9%
13	Jacksonville	FL	125,374	-	125,374	10.9%
14	Metro. Water Reclamation District of Chicago	IL	69,393	-	69,393	10.8%
15	New York City	NY	2,974,300	3,917,618	6,891,918	10.6%
16	Columbus	OH	-	92,895	92,895	10.6%
17	Dallas	TX	130,867	-	130,867	10.6%
18	San Antonio	TX	101,211	-	101,211	9.6%
19	Nashville-Davidson	TN	112,115	31,028	143,143	9.5%
20	Detroit Public School District	MI	-	112,351	112,351	9.2%
21	San Francisco City and County	CA	276,484	-	276,484	8.8%
22	Los Angeles Unified School District (Los Angeles County)	CA	2,500	529,235	531,735	8.3%
23	Detroit	MI	102,272	-	102,272	7.9%
24	Denver County School District 1 (Denver County)	CO	-	58,620	58,620	7.9%
25	Phoenix	AZ	100,758	-	100,758	7.7%
26	Chicago Public Schools (Cook County)	IL	425,647	-	425,647	7.7%
27	Honolulu City and County	HI	-	81,141	81,141	7.0%
28	Miami-Dade County School District	FL	-	232,647	232,647	7.0%
29	San Bernardino County	CA	-	142,063	142,063	6.7%
30	Broward County School District	FL	-	164,782	164,782	6.5%
31	Harris County	TX	93,003	-	93,003	6.5%
32	Palm Beach County School District	FL	-	117,265	117,265	6.4%
33	Los Angeles County	CA	786,174	-	786,174	5.8%
34	Westchester County	NY	-	90,323	90,323	5.2%
35	Suffolk County	NY	-	112,513	112,513	4.6%
36	Charlotte	NC	14,025	12,642	26,667	4.4%
37	Nassau County	NY	-	114,112	114,112	4.3%
38	Shelby County	TN	19,360	18,257	37,617	4.1%
39	Montgomery County	MD	-	109,344	109,344	4.0%

TABLE 5

Budgetary Metrics: Annual Required Contribution (ARC)

Rank	Issuer	State	Annual Required Contributions (\$000)			ARC as % of Operating Revenue
			Single-Employer & Agent Plans	Cost-Sharing Plans Pro-rata ARC (share of plan-level actuarial requirement)	Total	
40	Los Angeles CCD	CA	148	44,552	44,700	3.8%
41	Philadelphia School District	PA	-	85,201	85,201	3.8%
42	Baltimore County	MD	-	54,739	54,739	3.5%
43	King County	WA	-	19,110	19,110	2.5%
44	Washington	DC	127,200	-	127,200	2.1%
45	Dallas Independent School District	TX	-	27,021	27,021	2.0%
46	Cypress-Fairbanks Independent School District	TX	-	9,806	9,806	1.2%
47	Wake County	NC	966	10,799	11,765	1.2%
48	Houston Independent School District	TX	-	19,835	19,835	1.2%
49	Mecklenburg County	NC	954	13,178	14,132	1.1%
50	Northside Independent School District (Bexar County)	TX	-	8,360	8,360	1.1%

TABLE 6

Budgetary Metrics: Contributions

Rank	Issuer	State	Contributions (\$000) - Net of Enterprise and non-operating funds		Operating Revenue (\$000)	Funds Included in Operating Revenue	Contribution (excluding on- behalf payments) as % of Operating Revenue	Contribution as % of ARC (including cost-sharing allocations)
			On-Behalf Payments	Issuer Contributions				
1	Clark County School District	NV	-	312,850	2,203,478	General, Debt Service	14.2%	88%
2	Los Angeles	CA	-	580,653	4,506,243	General, Debt Service	12.9%	100%
3	Clark County	NV	-	212,348	1,884,884	General, Debt Service, Las Vegas Metro Police	11.3%	88%
4	Santa Clara County	CA	-	223,729	2,013,135	General, Debt Service	11.1%	100%
5	Jacksonville	FL	-	126,342	1,152,132	General, Debt Service, Special Revenue	11.0%	101%
6	Houston	TX	-	207,418	1,947,800	General, Debt Service	10.6%	79%
7	New York City	NY	-	6,891,918	64,889,788	General, Debt Service	10.6%	100%
8	Philadelphia City	PA	-	404,051	3,915,801	General, Debt Service	10.3%	66%
9	Dallas	TX	-	122,928	1,235,180	General, Debt Service	9.95%	94%
10	San Antonio	TX	-	101,211	1,056,806	General, Debt Service	9.6%	100%
11	Miami-Dade County	FL	-	306,384	3,216,767	General, Debt Service, Special Revenue	9.5%	87%
12	Nashville-Davidson	TN	-	140,400	1,509,502	General, Debt Service, General Purpose School Fund	9.3%	98%
13	Chicago	IL	-	383,393	4,196,335	General, Debt Service, Pension Levy	9.1%	32%
14	San Francisco City and County	CA	-	276,484	3,150,565	General, Debt Service	8.8%	100%
15	Fairfax County	VA	-	330,875	3,921,708	General, Debt Service, School Bd - GF (Net of County)	8.4%	76%
16	Detroit Public School District	MI	-	99,036	1,217,277	General, Debt Service	8.1%	88%
17	Detroit	MI	-	104,877	1,295,575	General, Debt Service	8.1%	103%
18	Columbus	OH	-	68,336	874,675	General, Debt Service Fund, Income Tax Fund	7.8%	74%
19	Phoenix	AZ	-	100,758	1,315,260	General, Debt Service, Neighborhood Protection, Public Safety Enhancement	7.7%	100%
20	Kansas City	MO	-	42,272	571,267	General, Debt Service	7.4%	60%
21	San Bernardino County	CA	-	142,063	2,106,156	General, Debt Service	6.7%	100%
22	Harris County	TX	-	93,003	1,437,640	General, Debt Service, Road & Bridge Fund	6.5%	100%
23	Honolulu City and County	HI	-	74,500	1,152,137	General, Debt Service	6.5%	92%
24	Miami-Dade County School District	FL	-	199,917	3,304,185	General, Debt Service, Non-Major Special Revenue & Other Fed.	6.1%	86%
25	Metro. Water Reclamation District of Chicago	IL	-	37,379	639,759	General, Debt Service, Retirement Fund, Construction Fund, Storm Water Fund	5.8%	54%
26	Los Angeles County	CA	-	786,174	13,620,804	General	5.8%	100%
27	Cook County	IL	-	155,819	2,769,219	General, Debt Service, Special Revenue, Health and Hospital,	5.6%	32%

TABLE 6

Budgetary Metrics: Contributions

Rank	Issuer	State	Contributions (\$000) - Net of Enterprise and non-operating funds		Operating Revenue (\$000)	Funds Included in Operating Revenue	Contribution (excluding on- behalf payments) as % of Operating Revenue	Contribution as % of ARC (including cost-sharing allocations)
			On-Behalf Payments	Issuer Contributions				
						Health and Hospital Non- Operating		
28	Broward County School District	FL	-	141,600	2,529,702	General, Debt Service, Special Revenue	5.6%	86%
29	San Diego City Unified School District (San Diego County)	CA	22,507	68,156	1,218,684	General, Debt Service	5.6%	59%
30	Palm Beach County School District	FL	-	100,768	1,830,975	General, Debt Service, Special Revenue	5.5%	86%
31	Westchester County	NY	-	90,323	1,730,703	General	5.2%	100%
32	Los Angeles Unified School District (Los Angeles County)	CA	-	321,877	6,428,934	General	5.0%	61%
33	Nassau County	NY	-	114,112	2,663,360	General, Debt Service, Police D and Police HQ	4.3%	100%
34	Shelby County	TN	-	37,789	908,066	General, Debt Service, Education	4.2%	100%
35	Suffolk County	NY	-	101,865	2,450,016	General, Police District	4.2%	91%
36	Montgomery County	MD	-	109,344	2,709,431	General, Debt Service	4.0%	100%
37	Charlotte	NC	-	23,762	607,125	General, Debt Service	3.9%	89%
38	Baltimore County	MD	100,000	54,739	1,571,442	General	3.5%	100%
39	Chicago Public Schools (Cook County)	IL	10,449	167,938	5,559,384	General, Debt Service	3.0%	42%
40	Los Angeles CCD	CA	-	29,867	1,176,083	General, Debt Service	2.5%	67%
41	Washington	DC	491,690	127,200	6,019,319	General	2.1%	100%
42	Denver County School District 1 (Denver County)	CO	-	12,859	744,021	General, Debt Service	1.7%	22%
43	Dallas Independent School District	TX	41,700	23,238	1,367,069	General, Debt Service	1.7%	86%
44	King County	WA	-	12,303	756,257	General, Debt Service	1.6%	64%
45	Wake County	NC	-	11,544	971,408	General, Debt Service	1.2%	98%
46	Cypress-Fairbanks Independent School District	TX	27,793	8,433	788,685	General, Debt Service	1.1%	86%
47	Mecklenburg County	NC	-	13,658	1,281,576	General	1.1%	97%
48	Philadelphia School District	PA	41,987	22,608	2,255,538	General, Debt Service	1.0%	27%
49	Houston Independent School District	TX	68,612	17,058	1,704,249	General, Debt Service	1.0%	86%
50	Northside Independent School District (Bexar County)	TX	30,638	7,190	779,397	General, Debt Service	0.9%	86%

TABLE 7

Fiscal 2011 Contribution Shortfalls Relative to ARCs

Rank	Issuer	State	Contribution Shortfall (\$000) - Net of Enterprise and non-operating fund support			Under Contributions as % of Operating Revenues
			Single-Employer & Agent Plans	Cost-Sharing Allocation	Total	
1	Chicago	IL	799,006	-	799,006	19.0%
2	Cook County	IL	337,905	-	337,905	12.2%
3	Denver County School District 1 (Denver County)	CO	-	45,761	45,761	6.2%
4	Philadelphia City	PA	210,888	-	210,888	5.4%
5	San Diego City Unified School District (San Diego County)	CA	-	62,643	62,643	5.1%
6	Kansas City	MO	28,739	-	28,739	5.0%
7	Metro. Water Reclamation District of Chicago	IL	32,014	-	32,014	5.0%
8	Chicago Public Schools (Cook County)	IL	247,260	-	247,260	4.4%
9	Los Angeles Unified School District (Los Angeles County)	CA	-	209,857	209,857	3.3%
10	Columbus	OH	-	24,559	24,559	2.8%
11	Houston	TX	54,292	-	54,292	2.8%
12	Philadelphia School District	PA	-	62,593	62,593	2.8%
13	Fairfax County	VA	40,917	64,788	105,705	2.7%
14	Clark County School District	NV	-	42,661	42,661	1.9%
15	Clark County	NV	-	28,957	28,957	1.5%
16	Miami-Dade County	FL	416	43,416	43,832	1.4%
17	Los Angeles CCD	CA	0	14,685	14,685	1.2%
18	Detroit Public School District	MI	-	13,315	13,315	1.1%
19	Miami-Dade County School District	FL	-	32,730	32,730	1.0%
20	Broward County School District	FL	-	23,182	23,182	0.9%
21	Palm Beach County School District	FL	-	16,497	16,497	0.9%
22	King County	WA	-	6,807	6,807	0.9%
23	Dallas	TX	7,939	-	7,939	0.6%
24	Honolulu City and County	HI	-	6,641	6,641	0.6%
25	Charlotte	NC	2,905	-	2,905	0.5%
26	Suffolk County	NY	-	10,648	10,648	0.4%
27	Dallas Independent School District	TX	-	3,783	3,783	0.3%
28	Nashville-Davidson	TN	2,743	-	2,743	0.2%
29	Cypress-Fairbanks Independent School District	TX	-	1,373	1,373	0.2%
30	Houston Independent School District	TX	-	2,777	2,777	0.2%
31	Northside Independent School District (Bexar County)	TX	-	1,170	1,170	0.2%
32	Mecklenburg County	NC	474	-	474	0.0%
33	Wake County	NC	221	-	221	0.0%
34	Baltimore County	MD	-	-	-	0.0%
34	Harris County	TX	-	-	-	0.0%
34	Los Angeles	CA	-	-	-	0.0%
34	Los Angeles County	CA	-	-	-	0.0%
34	Montgomery County	MD	-	-	-	0.0%

TABLE 7

Fiscal 2011 Contribution Shortfalls Relative to ARCs

Rank	Issuer	State	Contribution Shortfall (\$000) - Net of Enterprise and non-operating fund support			Under Contributions as % of Operating Revenues
			Single-Employer & Agent Plans	Cost-Sharing Allocation	Total	
34	Nassau County	NY	-	-	-	0.0%
34	New York City	NY	-	-	-	0.0%
34	Phoenix	AZ	-	-	-	0.0%
34	San Antonio	TX	-	-	-	0.0%
34	San Bernardino County	CA	-	-	-	0.0%
34	San Francisco City and County	CA	-	-	-	0.0%
34	Santa Clara County	CA	-	-	-	0.0%
34	Washington	DC	-	-	-	0.0%
34	Westchester County	NY	-	-	-	0.0%
48	Shelby County	TN	(172)	-	(172)	0.0%
49	Jacksonville	FL	(968)	-	(968)	-0.1%
50	Detroit	MI	(2,605)	-	(2,605)	-0.2%

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- » [Adjusted Pension Liability Medians for US States, June 2013 \(155103\)](#)
- » [Adjustments to US State and Local Government Reported Pension Data, April 2013 \(151398\)](#)

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